

Abstract

A method of fingerprinting digital video by inserting a watermark into
5 individual color channels or the intensity channel of a streaming video.
The watermark is a cryptographically encoded identifier for an
authorized video delivery consisting of spectral lines inserted in the
perceptually significant portions of the Fourier spectrum of the individual
frames of the video. In-phase and quadrature components or sinusoids
10 may be encoded in two chroma channels to provide shift-invariant
detection of the spectral lines. The pattern is repeated for a
perceptually significant duration to defeat frame-swapping attacks. The
watermark is extracted by comparing a suspected pirated video to the
original video. The watermark data is interpreted to identify the source
15 of the pirated video to enable criminal prosecution.